


Global Crisis

how cameramen can help



After many years working as an expert in high definition television in both North America (Kodak Canada, Canadian Broadcasting Company) and later the UK (Sony Broadcast and as an HD production consultant), Janet West, who graduated with a Masters degree in environmental chemistry, has returned to her roots to work as an environmental strategist. In this article, she asks all cameramen to think about how they, personally, can make small positive changes, as well as how they might use their skills as image-makers to help confront the global environmental crisis facing us all

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Global response

Mexico, March 2009, and news of swine flu hit the media, causing panic at the prospect of an international pandemic. By 28 April, cases had been confirmed in the Middle East and Asia-Pacific regions, and world health officials (WHO) speculated that American patients may have transmitted the virus to others who then travelled. On 11 June, WHO confirmed the global spread of the H1N1 influenza virus and developed countries forged into action, stockpiling Tamiflu and working on a vaccine. Plans were made for mass inoculation, prioritising the weak and vulnerable. Panic spread and emergency lines at hospitals were jammed with callers worried by every sore throat and cold symptom.

The response to swine flu was decisive. However, we are actually faced with a far more serious global catastrophe. Most people are aware it exists – GTC members have shot hours of footage proving it – and yet few viewers are responding by changing their lifestyle or their business practices. This crisis is the gradual destruction of our home, planet Earth. Sounds a little dramatic? Carbon dioxide (CO₂) levels in the atmosphere have dipped and risen in a cyclical pattern for centuries, but since the Industrial Revolution, the mean of this normal fluctuation has demonstrated a steady rise, which, since 1975, has been getting ever steeper.

According to the Tyndall Centre for Climate Change Research, in the UK, the CO₂ level in September 2009 was 384.78ppm. A simple calculation shows that with a steady rise of 3ppm per year, this will reach 450ppm (a critical level for temperature increase) in a mere 21 years. Why doesn't the world react in the same way it did for swine flu? Is it because flu is something we are familiar with? We recognise cold/flu symptoms and most of us have experienced some form of flu and know it upsets our quality of life, albeit for a short period. Global warming hasn't hit home in the same way – or perhaps it has and we are just in denial.

The power of the image

Television and film production harnesses creativity. After the release of his recent film *Home*¹ (the aerial cinematography on which was recognised at the 2009 GTC Awards), photographer Yann Arthus-Bertrand said, “It's too late to be pessimistic.” Let's agree to be optimistic, harness our creativity for combating climate change and explore what members of the GTC can do to make a contribution towards reducing global warming.

What makes humankind able to ignore climate change may be the same process that makes us capable of voluntarily and systematically destroying our own health by refusing to change destructive habits such as smoking, drug addiction and excessive drinking. In 1962, Rachel Carson, the pioneering environmentalist author of *Silent Spring*,² challenged the practices of agricultural scientists and the US government, and called for a change in the way people view the natural world. “Only human beings have gained the ability to reverse the roles and actually change the environment they live in.”

“Man has lost the capacity to foresee and forestall,” wrote Carson in the book dedication to Albert Schweitzer. “He will end by destroying the earth.” But who listened and who reacted?

Over recent years, many GTC members will have been involved in filming documentaries depicting the damage caused by anthropogenic activities. The latest work of photographer James Balog is dedicated to raising public awareness about climate change. According to Balog,³ there exists the technological and economic potential to cope with the problem, but climate change is happening faster than initially predicted. Along with a team from the Extreme Ice Survey (EIS), Balog has brought new evidence of this to light. The team has been observing – and has documented – the shocking effects of global warming on major glaciers in the northern hemisphere.

Time-lapse photography has provided visual evidence of global warming; the cameras clearly show



▲ Extreme Ice Survey time-lapse cameras in action, Columbia Glacier, May 2009



▲ Aerial shot of recently formed melt lake at Bishop Glacier, British Columbia, 2008

extreme ice loss that is raising ocean levels at an alarming rate. It is estimated that during the 21st century, the melting ice and the expansion of ocean water due to higher temperatures will result in an increase of sea level by one metre and in a loss of pure drinking water.⁴

for work'; Technology will sort it all out...! The misconception of many is that addressing environmental issues head on potentially means going back to cave-living and a reduction in the standard of living that we have all worked hard to achieve. This couldn't be further from the truth. Reducing

“stop eating that organically grown (but then air-freighted in) watercress from California”

“I believe we have an opportunity right now,” says Balog. “We are nearly on the edge of a crisis but we still have an opportunity to face the greatest challenge of our generation, in fact of our century. And this is a terrific call to arms to do the right thing for ourselves and for the future. I hope that we have the wisdom to let the angels of our better nature rise to the occasion.” More on angels later.

What can cameramen do?

Talking to most people in the developed world about what they are doing to offset their CO₂ emissions, the following comments are usually heard:

‘We do our bit with recycling...’; ‘I can't stop using my car... I need it

CO₂ emissions can only give us a better quality of life and this is where our industry can excel... creativity means opportunity, and images are the universal language of communication.

For a camera crew travelling around the country, there are ways to reduce fuel usage... and that will mean more money in your pocket. Only half filling a petrol tank makes a difference on both scores. A Land Rover has an average capacity of 55 litres, so with diesel weighing around 0.9kg/litre you can reduce the weight by around 25kgs which will mean roughly a 2g CO₂/km saving; meanwhile, the roughly 2% reduction in overall weight will save you about £1 every fill-up.

Other measures include: driving at 90kph versus 110kph (which saves

“manufacturing one 32MB RAM module requires 32kg of water, 1.6kg of fossil fuels, 700g of gases and up to 72g of different chemicals”



▲ Do you really need that new gadget?



▲ Why drink water from a plastic bottle when there are reusable alternatives?

20% fuel); ensuring the tyres are inflated properly; reducing weight by avoiding carrying everything when you actually only need half the kit. These all help not only pollution levels but your pocket as well. Next time you buy or rent a vehicle, ask what can be taken off the vehicle rather than added on, thereby reducing the fuel burn and emissions.

GTC members often eat on the road – in restaurants, hotels and motels. Start asking where the food in these establishments comes from. How many air miles has it travelled? Stop eating that organically grown (but then air-freighted) watercress from California. According to ICCAT⁵ scientists, the spawning biomass of bluefin tuna is now less than 15% of that before fishing began. So, knowing that bluefin tuna is in danger, don't order it. No demand would mean a chance to revive stocks. At the end of a tough day, you may be salivating at the thought of a good steak – but remember that 1kg of beef consumes 15,000 litres of water and that the feed crops for those cattle may have

been grown on land depriving a local community of food. There is enough food to feed the 6.5 billion population today – and even the predicted 9 billion in 2050 – but not with the kind of diet we take for granted.

To drink water is one of life's essential requirements... but why from a plastic container? Those who have filmed the Great Pacific Garbage Patch – a mass of rubbish floating in the Pacific the size of Texas and growing – have witnessed the broken, brittle, plastic particles that our finned friends sadly mistake for plankton. How long would we humans last on a diet of six parts plastic, one part food? Alternative containers that are strong, lightweight and re-useable are available, and if all they have contained is water, then why waste energy and yet more water on sterilisation in a dishwasher?

A cameraman's kit is a thoughtfully put together, carefully researched toolbox. But how many of you ever ask the equipment suppliers what the LCA (life cycle assessment – cradle to grave analysis of energy, raw materials

water and waste) is for each product? There are innovations coming to market: Lite Panels, launched in 2009, provide lightweight, silent, portable, dimmable 5600K or 3200K ballast-free illumination; and there are set-top boxes that switch off rather than stay in standby. Major companies like Sony are looking at these issues in both their product design and manufacturing practices (see pages 44–46). So, ask the question and bear it in mind when making your choices.

In recent years, production techniques have become sloppy and we rely on post to 'fix it'. But this manipulation comes at a cost. Huge banks of servers require energy. In Western Europe alone, the energy used to run data centres and server farms exceeds 42TWh.

Do you really need that?

Then there is life at home. You've been away on location and maybe delayed – a gift for the partner and kids might help. Tim Kasser, Professor at Knox University, in his book 'The High Price of Materialism'⁶ studies how people with a focus on material things have lower personal well-being and psychological health than those who focus on non-materialistic things to achieve happiness. So taking time

with the family and 'being' rather than 'having' is proven to create a happier home life. Excessive consumerism is killing our planet. Sure, it might be argued it is helping business, but how long can business survive if we are depleting our resources?

Many of us working in television like gadgets, and for many years having the latest gadget may have given the edge over a competitor. However, the plethora of mobile devices, from laptops to MP3 players to phones, has created unbelievable amounts of waste. Memory has become inexpensive over the last few years but manufacturing one 32MB RAM module requires 32kg of water, 1.6kg of fossil fuels, 700g of gases and up to 72g of different chemicals.⁷ The average British person throws away 3.3 tonnes of electrical waste during their lifetime. A mobile phone can be a life-saver, an essential tool to get that all-important assignment, to get out of trouble, to bring in replacement kit in case of a failure, or to provide a satellite link for a breaking news story. But do we need a new one every time we renew our annual contract?

It's no use waiting

Development of production kit requires technology and innovation...



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and often many years. Our industry sees amazing new products every year – ever 'improved' cameras, transmission and display devices, better lenses and filters. But some of these have taken years, even decades, to develop. You may not know that HDTV was actually conceived the year before colour television was introduced. French physicist A E Becquerel had recognised the photovoltaic cell in 1839, and Charles Fritts coated the semiconductor selenium with an extremely thin layer of gold to form the junctions of the first PV solar cell back in 1883. But Planet Earth does not have 50 years plus to develop and implement technological solutions.

'Re' isn't just for recycling. There's 'Re-using' products for the same purpose or for another; 'Re-pairing' kit rather than chucking it out (which can also save us money); and 'Re-conditioning' and 'Re-manufacture'.

Social networking has become a compulsion but all these electronic devices require energy. Those using social media networks with the promise of better experiences and instant information anywhere, any time, are at risk of struggling to discern between valid and invalid

information, and losing the skill of conversation, while shy folk get even more isolated. Addressing sustainable development requires community interaction, not isolation, at local, national and international levels.

With images a common language for all, GTC members have the power of a unique way in which to communicate. We need to show the retreating glaciers – but balanced with positive messages as well. Let's also show the activity in transition towns, and more news of what the average person can do on a day-to-day basis (and in so doing save money as well as resources), rather than fixating on the disempowering doom and gloom so often portrayed.

What will motivate us to dramatically change the way we live and work? A new baby in the family? A chance to save money? The opportunity for a better life? Or life-threatening floods?

So, back to angels. Professor Roland Clift, CES Surrey University, says "Angels wear Prada". Buying repairable and re-useable quality that lasts, rather than quantity, is one way forward. Like angels, we all need to look over and look after each other. Global education is key – and GTC

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members can be part of this education process. Let's get creative and start to generate creative and interesting ideas to address global warming, and not just sensationalist documentaries explaining that we have a crisis.



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Fact File

After over 25 years in HDTV production, Janet West, MSc, ISIE, AIEMA, returned to her environmental roots in 2007 and is lecturing at SKEMA Business School and consulting as an environmental strategist, helping business become sustainable. Email: janetwest@free.fr



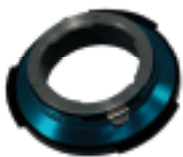
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